

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE**

PACIFIC BIOSCIENCES OF  
CALIFORNIA, INC.,

Plaintiff,

V.

OXFORD NANOPORE TECHNOLOGIES, INC.  
and OXFORD NANOPORE TECHNOLOGIES,  
LTD.,

Defendants.

C.A. No. 17-275-LPS-CJB  
C.A. No. 17-1353-LPS-CJB

# MEMORANDUM ORDER

Having presided over trial in this matter between March 9 and March 18, 2020, having heard extensive oral argument on July 28, 2020, and having provided the parties with a bench ruling on July 30, 2020,

IT IS HEREBY ORDERED that:

1. Pacific Biosciences of California, Inc.’s (“PacBio” or “Plaintiff”) motions for judgment as a matter of law or for a new trial (C.A. No. 17-275 D.I. 495; C.A. No. 17-1353 D.I. 526) are DENIED.
2. Oxford Nanopore Technologies, Inc. and Oxford Nanopore Technologies, Ltd.’s (together “Oxford” or “ONT” or “Defendants”) motions for judgment as a matter of law or a new trial (C.A. No. 17-275 D.I. 497; C.A. No. 17-1353 D.I. 528) are DENIED.

The Court's rulings are for the reasons given on July 30, including as follows:

I have carefully reviewed, of course, everything that occurred at trial, your detailed briefing, the full record, [and] the arguments that were made earlier this week . . . .

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First, we have, of course, the plaintiff PacBio's motion for judgment as a matter of law that . . . three of the patents are not invalid or alternatively for a new trial.

First, just a bit on the legal standard. "To prevail on a motion for judgment as a matter of law after losing a jury trial," which is the case here with respect to the issues on which PacBio has moved, "a party must show that the jury's findings, presumed or express, are not supported by substantial evidence or if they were, that the logical conclusion implied by the jury's verdict cannot in law be supported by those findings." [1] . . . Further, the Court must give the "verdict winner . . . the benefit of all logical inferences that could be drawn from the evidence presented, resolve all conflicts in the evidence in [the verdict winner's] favor and[,] in general[,] view the record in [the] light most favorable to [the verdict winner]." [2]

So let me turn to the issues raised by PacBio. First, [PacBio] seek[s] judgment as a matter of law . . . that the '400 and '323 patents are not invalid and that ONT is liable for infringement or alternatively for a new trial. This is . . . directed to enablement. Enablement is a question of law based on underlying factual findings. We know that from, among other cases, the *Enzo Life Sciences* case of the Federal Circuit in 2019. [3]

Here, there were material factual disputes, and I must presume that they were resolved by the jury at trial in favor of ONT. When taking the jury's implicit findings and adding them to the uncontested evidence related to enablement, there is substantial evidence to support the jury's verdict of lack of enablement of the asserted claims of the '400 and '323 patents.

The premises of PacBio's motion are not persuasive in the post-trial context in which the motion arises. For instance, PacBio emphasiz[es] that ONT expert Dr. Goldman's testimony on enablement was conclusory and improperly assumed that a recipe was required to satisfy the enablement requirement.

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<sup>1</sup> *Pannu v. Iolab Corp.*, 155 F.3d 1344, 1348 (Fed. Cir. 1998).

<sup>2</sup> *Williamson v. Consolidated Rail Corp.*, 926 F.2d 1344, 1348 (3d Cir. 1991).

<sup>3</sup> *Enzo Life Sciences, Inc. v. Roche Molecular Systems, Inc.*, 928 F.3d 1340, 1345 (Fed. Cir. 2019).

PacBio further notes that on cross-examination, Dr. Goldman seem[ed] not [to] know the *Wands*<sup>4</sup> [f]actors and even admitted that a person of skill in the art or a POSA could perform the method of claim 1 of the '400 patent.

PacBio might be correct that Dr. Goldman's testimony by itself would not be the necessary substantial evidence to support the jury's finding of lack of enablement of the asserted claims in the '400 and '323 patent.

But more important than that is that ONT is correct that the evidentiary record as a whole, taken in the light most favorable to ONT as the verdict winner on these issues, does contain substantial evidence to support the verdict.

The Court must, in evaluating this motion, consider the entire evidentiary record before the jury, not just the portions of the record that PacBio highlights. The jury was instructed to consider all the evidence . . . . [S]pecifically on enablement [the jury] was not even told that it needed expert testimony and was not told even with respect to the *Wands* [f]actors that it must find all of the *Wands* [f]actors. It was instead instructed that these, the *Wands* [f]actors, were factors you may consider in determining whether making the invention would require undue experimentation. . . .

There is much evidence that the jury could have credited beyond just what the plaintiff pointed to to constitute substantial evidence to support the nonenablement finding. Among the evidence that the jury could have credited is what is well and accurately summarized in defendants' slides that were submitted in connection with the proceeding the other day. For instance, at slides 25 and 26, 28 through 36, and 42 through 56, all summarizing evidence presented to the jury which the jury could have credited.

. . . . For example, ONT accurately and fairly summarizes in slide 26 and also in its briefing at page 10 how much of the evidence on several of the *Wands* [f]actors was uncontested.

For example, with respect to Factor 3, the presence or absence of working examples. Factor 4, the nature of the invention. Factor 6, the relative skill of those in the art. And Factor 8, the breadth of the claims.

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<sup>4</sup> *In re Wands*, 858 F.2d 731 (Fed. Cir. 1988).

... Dr. Goldman ... did opine that a person of ordinary skill in the art could not perform claim 1 of, for example, the '400 patent.

The jury heard Dr. Goldman's direct and redirect examination as well as his cross-examination, and the jury was free to credit whatever opinions he expressed, including the opinion of nonenablement[,] which he did express in front of the jury as part of his examination.

As I go through the rest of this motion, I will recite additional evidence specifically that the jury could have credited to find substantial evidence to support the verdict, the clear and convincing finding of lack of enablement of the claims of the '400 and the '323 patent.

Fundamentally, the jury was free, in light of the totality of the evidence, to credit Dr. Goldman's opinions that the patents I'm now discussing were invalid due to lack of enablement. The jury certainly was free to credit PacBio's contrary evidence. The jury could have found that defendants' experts lacked credibility, but the jury's implicit findings were to credit defendants' expert[s], and on a JMOL motion like this, "the Court may not weigh the evidence, determine the credibility of witnesses or substitute its version of the facts for the jury's version."<sup>5</sup>

... There is no requirement -- contrary to the suggestion of PacBio, ... that the expert himself harmonize what PacBio contends is contradictory testimony even if, according to one side, that expert makes an admission against the interest of the party that he is testifying for.

So the fact that one might view the record as one in which Dr. Goldman made an admission that goes against ONT's case, and Dr. Goldman himself did not harmonize that admission or [the] apparent conflict with other testimony he gave, ... does not, in my view [--] and I have not seen any authority to the contrary and certainly don't believe PacBio cited any [--] that does not in my view equate to a basis for granting the relief that plaintiff is seeking here.

ONT, as a litigant, was free to try to harmonize all the evidence that the jury heard and try to persuade the jury to credit

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<sup>5</sup> *Fowler v. UPMC Shadyside*, 578 F.3d 203, 213 n.8 (3d Cir. 2009).

the evidence ONT wanted the jury to credit. And implicitly, ONT was successful in this endeavor.

There is also no requirement that every theory on which the jury may have found, for instance, lack of enablement, had been articulated in detail by the expert witnesses themselves.

Again, I don't read the authority cited by PacBio as imposing such a requirement in a jury trial. PacBio relies on the Third Circuit's decision in . . . *Roebuck vs. Drexel University*, [852 F.2d 715, 736-37 (3d Cir. 1988),] but I think that case is distinguishable from the situation here. The Third Circuit there recognized the extraordinary number of inferences that the jury must have drawn in order to reach the verdict that it did and noted that a number of arguments upon which the [District] Court there relied on to uphold the verdict . . . do not appear to have been made by the litigant at trial. Here, by contrast, the jury could have reasonably reached a verdict of nonenablement from the expert evidence, the other evidence, and the theory of nonenablement that ONT explicitly offered at trial.

The theories of nonenablement that ONT presses in imposing PacBio's motion are all consistent with the theories of nonenablement pressed at trial. The jury heard evidence, for example, that, when viewed in the light most favorable to ONT, suggested that at the time these patents were filed, nanopore sequencing was a nascent technology, that substantial challenges remained to developing this technology, that PacBio did not perform nanopore sequencing, and that PacBio filed patents to block competition, all of which could have led the jury to reasonably infer that these patents were not intended to teach about nanopore sequencing and[,] in the context of all of the evidence, therefore, were not enabling. Other evidence of nonenablement included Dr. Dessimoz's and Dr. Akesson's testimony that the '400 and '323 patent specification provide no guidance for determining "N," which is a prerequisite for using the claimed invention. From this, the jury could reasonably have concluded that undue experimentation was required to practice the asserted claims of the '400 and '323 patents.<sup>6</sup>

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<sup>6</sup> See *ALZA Corp. v. Andrx Pharm., LLC*, 603 F.3d 935, 941 (Fed. Cir. 2010) (“[W]hen there is no disclosure of any specific starting material or of any of the condition[s] under which a process can be carried out, undue experimentation is required.”) (internal quotation marks omitted).

Other evidence of nonenablement included Dr. Dessimoz and Dr. Fair's testimony that a person of [ordinary] skill in the art would not know how to determine a template nucleic acid sequence with the claimed methods because the patents provided no guidance for remedying signal degeneracy which, according even to PacBio's Chief Technology Officer, Dr. Turner, was a key problem in nanopore sequencing that the patent sought to address.

PacBio contends that it presented sufficient evidence from which a jury could have found that the '400 and '323 patents allowed a person of skill in the art to determine the value of "N." But even if that is true [--] and I would note that PacBio's argument here seems to be based on parts of the specification that were not referenced during trial [--] . . . the issue on this motion is whether substantial evidence that the jury was free to credit was presented to support the actual verdict that the jury returned, which was findings of nonenablement and, here, that in fact happened and was presented.

PacBio analogizes the present situation to summary judgment cases where courts hold that summary judgment will not be denied just because a witness who said one thing in a deposition put in an affidavit . . . contradicting that earlier deposition testimony.

That analogy, in my view, fails here. For instance, unlike in . . . *Daubert* [*v. NRA Group*, 861 F.3d 382, 391-92 (3d Cir. 2017)], . . . where the Third Circuit applied the sham affidavit doctrine, here, ONT did not offer an affidavit that contradicted Dr. Goldman's earlier deposition testimony without a satisfactory or plausible explanation. . . . Here, instead, Dr. Goldman offered what the plaintiff characterizes as contradictory testimony during trial in front of the jury. The jury saw all of the testimony from Dr. Goldman, and the jury was free to credit whichever portions of that testimony it choose to credit. And implicitly, it chose to credit the portions of that testimony that it found to be consistent with the overall record and supporting a verdict of nonenablement.

Unlike another case relied on by PacBio, *ParkerVision* [*v. Qualcomm, Inc.*, 627 Fed. App'x 921, 924 (Fed. Cir. 2015)], . . . ONT did not rest its case on Dr. Goldman's unexplained self-contradictory testimony. Rather, ONT presented substantial evidence including all of the testimony that I have referenced here today . . . .



PacBio is correct that enablement does not require a patent to contain a recipe or step-by-step recitation of how to perform the claimed invention but those points do not alter the outcome on this motion. The Court's instructions properly conveyed the law of enablement to the jury, including the important consideration of whether undue experimentation would have been required by a POSA.

ONT and its witnesses did not apply a legally improper standard for enablement. Even if they had, and they didn't, the jury was instructed to follow the legal standard that I gave them, and they are presumed to have done just that.

The Court is not called upon, despite the parties' rhetoric, to decide whether the enablement case was thin, as PacBio repeatedly asserts, or instead based on a mountain of evidence, as ONT insists. The issue for me is simply whether, taking the totality of the evidence in the light most favorable to ONT as the verdict winner on these issues, there is or is not substantial evidence to support a finding by clear and convincing evidence of lack of enablement.

Applying that standard, I conclude that, yes, there is substantial evidence to support the verdict. Therefore, I will deny this portion of PacBio's motion.

Finally, on this part of the motion, because substantial evidence supports the jury's conclusion that the '400 and '323 patents are not enabled, there is no basis here for granting a new trial on these issues.

Turning at slightly less length to the motion [by] PacBio for judgment as a matter of law that claims 2 and 12 of the '056 patent are not invalid for lack of enablement and that ONT is liable for infringement, again, all parts of the motions are denied. This part is denied.

Many of the arguments that PacBio makes in connection with the nonenablement verdict for the '056 patent . . . were also made for the '400 and '323 patents. Therefore, I have already addressed many of PacBio's arguments in that context. I will not repeat myself. I incorporate what I had already said to this point about the enablement verdict. And to the extent PacBio has made the same arguments directed to the '056, my view of those arguments [is] the same as I just expressed with respect to the '400 and '323 patents.

PacBio's motion as directed to the '056 patent is focused on the testimony of Dr. Ha, who, according to PacBio, . . . admitted that a POSA would know how to perform Step 1(e) of the '056 patent and didn't consider the relevant Akeson I reference and didn't address the undue experimentation factors. Those are the arguments PacBio principally makes with respect to the '056 patent.

The Court is not persuaded by these arguments. Instead, the Court agrees with ONT that the jury could have reasonably interpreted Dr. Ha's testimony as not relating to the practice of Step 1(e) in the nanopore system of the asserted claim but instead [] by itself, that is, Step 1(e) in a vacuum.[]

This may not have been the most reasonable interpretation of Dr. Ha's testimony, but it is not an unreasonable interpretation. And the Court is obligated under the law to credit any reasonable inference the jury may have drawn in ONT's favor, including this one.

The jury . . . was not required to view Dr. Ha's testimony as the square admission that PacBio characterizes it as being.

Additionally, the issue for the Court is whether the record as a whole, and not just Dr. Ha, contains substantial evidence to support the jury's verdict of nonenablement with respect to the claims of the '056 patent. And in my view, it does. As ONT shows, both parties' witnesses offered testimony that[,] when viewed in a light most favorable to ONT[,], could have led a reasonable jury to conclude that obtaining an enzyme that performs two kinetic steps required undue experimentation due to [the] ample time and resources needed to do so and the lack of guidance from the specification.

For that, I would refer you to, among other things, the evidence cited at D.I. 499 at pages 6 to 9.

Because substantial evidence supports the jury's conclusion that the asserted claims of the '056 patent are not enabled, there is no basis to grant a new trial on this issue. That portion of the motion is denied.

That takes me next to the request by PacBio[:] for a new trial on all claims due to ONT's prejudicial COVID-related comments. This portion of the motion is denied.



PacBio ha[s] failed to show that ONT's statements during opening or at any other time during trial were so prejudicial as to affect the fairness of the trial and thereby cause manifest injustice. That's the standard applicable here.<sup>7</sup> . . . .

There has been no finding of a MIL or motion in limine violation after opening statement, including no finding of a MIL violation during closing argument. Nor does PacBio show in its post-trial briefing or did it show in its argument the other day that there were MIL violations after the opening statement.

Further, PacBio provides no persuasive reason to conclude that ONT's statements probably influenced the jury's verdict, which is another part of PacBio's burden on this portion of its motion. For that, you can find the applicable legal standard in the Third Circuit's 1992 decision in *Fineman[v. Armstrong World Industries, Inc.]*, 980 F.2d 171, 206-07 (3d Cir. 1992) and] 1995 decision in *Blanche Road [Corp. v. Bensalem Twp.]*, 57 F.3d 253, 264 (3d Cir. 1995),] . . . . PacBio points to the jury's findings on lack of enablement of the asserted claims of the '400, '323 and '056 patents as support for why it should get a new trial based on COVID-related comments of the defendant, arguing that those verdicts cannot be squared with what PacBio characterizes as ONT's expert expending only two sentences on the subject and not being able to identify any supporting evidence. . . .

But as I have already explained, there was much other substantial evidence that supported the nonenablement verdict. So that argument is not meritorious.

PacBio implies that the jury was improperly persuaded to try to preserve ONT's role in the fight against COVID-19, but that contention is undermined by the facts that the jury found that ONT infringed PacBio's patent and the jury even found that one asserted patent, the '929 patent, survived ONT's enablement challenge.

The point being, of course, that the verdict was not a complete unadulterated victory for ONT. On three of the four patents-in-suit, the verdict was split. The verdict simply gives no indication that the jury was inflamed by passion nor influenced by defendants' MIL violation.

While patent lawyers understand that the end result of the . . . verdict returned by the jury . . . is essentially a win for ONT

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<sup>7</sup> See, e.g., *Isco Int'l, Inc. v. Conductus, Inc.*, 279 F.Supp.2d 489, 510 (D. Del. 2003).

because no relief can be provided to PacBio based on this verdict . . . it is not the kind of verdict sheet one would expect, not the kind of verdict one would expect from a jury that was inflamed by passion, distracted from the evidence, worried about, in a way that it should not have been, about the impact of its verdict or acting in an improper results-oriented fashion.

The Court believes that had those things happened and impacted this jury, we would have seen a verdict that was wholly or at least almost wholly for ONT[,] not the split decision that this jury returned.

As further support for my conclusion to deny this portion of the motion, I think it is helpful to go back and recall the timing of this trial. It was an extraordinary time and ultimately recalling that context further illustrates in my view [as to] how PacBio has failed to meet its burden.

Jury selection and evidence began on Monday, March 9th. The Court, the parties, and the jurors did not mention any coronavirus concerns on that day, and trial began seemingly smoothly.

In opening statements on March 9th, plaintiff, PacBio, was the first party to mention coronavirus. In opening statements -- and this is from the [trial] transcript at pages 120 and 121 -- counsel for PacBio said: "We all know in these times, the Center for Disease Control is a particularly important institution. Now, you don't test for coronavirus, which was all on I think everybody's mind, you know, with this [PacBio] sequencer . . . But it helps you understand the depths of what it is and what it is like so you can research for it. Maybe help develop a vaccine."

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PacBio made the first mention of coronavirus at this trial and evidently did it and told us they did it because [they] knew that ONT would be itself referencing coronavirus in its opening statement. The parties had been required to exchange their PowerPoint presentations in advance of the opening statement and through that process obtained insight into what one another was going to say in opening statement.

But with that knowledge, I think it is notable PacBio, knowing of ONT's plans for the opening statement, did not object

to this portion of ONT's plans, did not ask me to prevent what it knew was coming as a reference to coronavirus.

Instead, to all appearances, PacBio was content to have this issue play out in front of the jury with both parties making their intended reference to coronavirus, even though no discovery had been taken on either party's effort in connection with coronavirus or COVID-19.

And I'll note parenthetically I did not know, during opening statement, that coronavirus had not been a subject of discovery. I assumed that [--] because I don't think I had heard of coronavirus during fact discovery in this case [--] but I did not know whether it had been a subject of discovery, and both parties referenced coronavirus in opening; and I had no basis to think at that point, in real-time, that either side was unhappy about those references.

Now, in [its] opening, ONT did say more about coronavirus than PacBio did. For instance, ONT said, "Oxford Nanopore did all the work to make nanopore sequencing a reality, to make a product that is changing lives as we speak. Whether it is helping people fighting the coronavirus outbreak, characterizing cancer, keeping food safer . . . the CDC . . . used nanopore sequencing to understand the first cases of coronavirus in the U.S. . . . Only Oxford sequencers like this could be rapidly assembled and distributed to China and the many labs sequencing samples around the country, and now these minIONS are in the hands of scientists and public health officials in China who are on the ground in real-time, monitoring the spread of the virus and working desperately to control it." And he [i.e., counsel for Oxford] went on from there.

And PacBio did object during ONT's opening, and the parties had a discussion at sidebar at which I told Mr. Hash [i.e., counsel for Oxford] he was certainly walking a fine line. And I said at some point, I may have to tell the jury that they are to ignore any suggestions about what may happen after this case because they are not to do that. And Mr. Hash said he understood.

That evening, after a press report emphasized that ONT had characterized this trial about being whether its technology that was being used to fight coronavirus might have patent infringement liability issues, . . . PacBio submitted a request for curative instruction[s]. And the next morning, I heard extensive argument from the parties, and it's true that in the context of that argument, PacBio's attorney did state the bell cannot be unrung.

But in my view, this is far from an assertion that whatever damage that was done to PacBio could not be cured. At no point, not at that point or at any later point during trial did PacBio say or, in my view, even suggest that the damage that had occurred could not be cured. The only relief PacBio sought was the curative instructions that morning; and I gave them exactly as PacBio asked and exactly at the time that PacBio asked me to do it.<sup>[8]</sup>

I believed at that time, and still do, that those curative instructions fully cured the unfair prejudice to PacBio from the violation of the MIL order from defendants' opening statement.

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Thereafter, the parties complied with the Court's Order that they confer with one another, and provide notice to the Court before any further reference would be made to coronavirus in front of the jury.

Now, by the third day of trial, Wednesday, March 11th, that night, President Trump gave an address to the nation on the coronavirus pandemic; and at roughly the same time, the National Basketball Association announced it was suspending its season effective immediately.

Based on those developments, I had a discussion with counsel the next morning, March 12th, and I said the following: "What you know, of course, is the President gave his address last night about the pandemic of the coronavirus. . . . So far, no jurors have raised any concerns with any of us at this point. I am concerned that if the jury does raise a concern about whether they can comfortably spend the next five days with us, and I will not be able to tell them that they're required to stay here, particularly if school is closed, which has not happened yet, . . . at least at the public school level yet. So I thought we should talk about this, because I don't want to heighten anybody's concern, least of all the jury's, but I am concerned about if the jury does start to have concerns how we're all going to deal with that."

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<sup>8</sup> (See Tr. at 303) ("In opening statement, ONT argued that this isn't the first time that PacBio has tried to use its patents to exclude nanopore sequencing. However, if you find ONT liable for patent infringement, you are not – you are only being asked to award monetary compensation to PacBio. You are not being asked to exclude any ONT product from the market or to stop any research work being performed on ONT products.")

And we had a discussion, and neither party asked for any relief. We continued with trial as the jury showed up that day and continued to show up every other day of trial.

Over the course of the trial, the Governor of Delaware issued three emergency orders which provided, among other things, public gathering of 50 or more people [were] canceled. No indoor or outdoor seating for restaurants or bars. Various entertainment facilities were to cease operation.

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[A]ll of [that] further elucidates I think that either party could have moved for a mistrial or for a suspension of trial or some other relief, but no party did.

The jury dutifully continued to fulfill its obligations, showing up and not expressing any doubts or concern on Friday, March 13th, Monday, March 16th, and Tuesday, March 17th. Closing arguments were completed around noon on March 17th and included both parties thanking the jury for its extraordinary service, which was a well deserved comment.

There were several questions from the jury over the course of that afternoon. And, with counsel's assistance, we responded to those juror notes. And then with the parties' consent, at around 4:45, I sent a note to the jury effectively asking whether they wanted to stay and deliberate longer or come back the next day.

And they wrote back: "Thank you, Judge. We do not feel we will be able to reach a verdict even staying late tonight. We will conclude at 5:00 p.m. and reconvene tomorrow." Counsel expressed some surprise at this response, that the jury was still deliberating and expressing an interest in returning to the court for another day of deliberation[s], but again there was no objection from any party to allowing the jury to continue to do as it requested.

So the jury was permitted to, and dutifully came back the next morning, the morning of Wednesday, March 18th. They picked up deliberations around 9:00 o'clock and deliberated for approximately two more hours until around 11:00 a.m. [when they] notified the Court that they had reached a verdict.

I advised the parties of this fact and provided one final opportunity for the parties to indicate if there was any reason I should not take the verdict, and they expressed none.

We took the verdict. It was what you all know it was. We all thanked the jury then for their extraordinary service and let them go.

I took the time to highlight this chronology because again it demonstrates to me this jury, there is just no indication . . . that this jury was inflamed, that it was not careful, that it was not deliberate, that it did not follow my instructions, that it did not [act] impassionately . . . and carefully review[] the evidence. There is no indication of any sort that the jury did anything other than what it was supposed to do, notwithstanding the violations of my MIL order at the start of the trial and notwithstanding the worsening situation in the world, including in Delaware, that evolved over the course of our trial.

Under these circumstances, PacBio has not persuaded the Court that it should take the extraordinary step of wiping out a verdict that even PacBio, to all appearances, was absolutely content to take -- content to take, that is, until after PacBio learned of what the verdict was and learned that it had not achieved the outcome it had hoped for with the jury.

In sum, the Court agrees with ONT [that] "there is no basis to conclude that the jury's verdict was premised on the possible consequences of this litigation as opposed to the wealth of evidence on each substantive issue, including enablement." That's a quote from an ONT brief, D.I. 499 at 16 to 17.[]

That is a lot said about the plaintiff's motion. Let me now turn to the defendants' motion. ONT's motion for judgment as a matter of law or a new trial [is,] as I have said, denied.

First, the defendant seeks judgment as a matter of law of noninfringement of the '400 and '323 and '056 patent. Essentially, ONT offers four reasons for the relief it seeks but none of them warrant[s] the relief sought.

First, ONT argues that no evidence shows that RNA sequencing kit infringed the '056 patent.

In relation to this argument, PacBio agrees that it offered no expert testimony that RNA sequencing kit[s] infringed the '056



patent. And it is true that the jury was instructed that PacBio asserted that the RNA sequencing kit infringed the '056 patent . . . . [B]ut all of this is irrelevant to the motion because[,] as PacBio argued, the jury's general infringement verdict for the '056 patent is supported by the substantial evidence establishing that . . . defendants' products . . . infringe when used in its [D]NA kit.

This is sufficient in my view to sustain the jury verdict of infringement with respect to the '056 patent. It's consistent with the legal principles in the *i4i* decision, Federal Circuit (2010), 598 F.3d at page 849.<sup>9</sup>

Second, ONT argues that no evidence shows that sequencing systems using flip-flop infringe the '400 and '323 patent[s]. ONT argues there is no evidence that the flip-flop systems perform the comparing step of the '400 and '323 claims.

Taking the evidence in a light most favorable to PacBio as the verdict winner here, I disagree with ONT. [Viewed] in a light most favorable to PacBio, Dr. Dessimoz's testimony that flip-flop uses the same training data set as the older software that performs the comparing step could have persuaded a reasonable jury to find that flip-flop also performs this step.

[This] conclusion . . . could have been found to be further supported by a reasonable jury [based on] ONT expert Dr. Goldman's testimony that flip-flop is used as an RNN, that is, a Recurrent Neural Network.

The third argument ONT makes is that there was no evidence showing that the '056 patent step of selecting reaction conditions has ever been performed in the United States. This is based on the . . . clause . . . in claim 1 of the '056 patent, which provides "whereby the reaction conditions are selected."

ONT insists that this phrase requires the accused infringer to select the reaction condition. And ONT further insists that the trial evidence shows the reaction conditions were selected in the United Kingdom, not the United States.

PacBio responds that the reaction conditions define the environment in which the accused infringer must act, not a step that needs to be performed, making it immaterial whether the selection is performed in the United States or elsewhere.

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<sup>9</sup> *i4i Ltd. P'ship v. Microsoft Corp.*, 598 F.3d 831, 849 (Fed. Cir. 2010).

The Court agrees with PacBio. I am not persuaded that a person of skill in the art would read the cited “whereby” clause as imposing a claim limitation. In any event, the evidence presented at trial viewed in the light most favorable to PacBio provides substantial evidence that could lead a reasonable jury to find that users in the United States have selected reaction condition[s].

For instance, Dr. Dessimoz testified that users of the accused product set parameters such as voltage and run time when they select a kit to operate the product[. . . Even ONT] witness[,] Spike Willcocks[,] testified that users “wouldn’t always use the same things that we would explain to them to use.”

Giving PacBio the benefit of all logical inferences that could be drawn from the evidence presented, which I’m required to do at this stage, . . . this evidence could support the jury’s implicit finding.

Fourth, ONT argues that no evidence shows that the “N” limitation was met for any alleged infringing activity for the ’400 and ’323 patent[s].

In this regard, ONT insists that PacBio violated the Court’s claim construction, that “N” includes all bases that affect the current measurement, by arguing that only bases dominating the current measurement are relevant to the value of “N.” The Court finds no improper inconsistency between PacBio’s evidence and argument on the one hand and the binding claim construction on the other.

[Viewing the] evidence in a light most favorable to PacBio could have led the jury to reasonably find that not every nucleoside that can affect the current actually does affect the current[, that] one can determine how many nucleotides affect the current by examining how many combinations of nucleotides the software uses[, and] up to five nucleotides affect the current measurements in ONT’s product that use the R9 pores and up to nine nucleotides affect the current measurement in ONT’s products that use the R10 pores.

The jury could have found all of that in favor of PacBio. So in the end, there is substantial evidence to support the jury’s verdict of infringement and these aspects of ONT’s motion are denied.

ONT next moves to vacate the infringement judgment and for a conditional order of a new trial on infringement of the '400, '323, and '[0]56 patent[s].

ONT argues for a new trial on the grounds that the verdict form conceal[ed] the jury's decision on specific products within a generic infringement determination and thereby made it impossible to know whether the jury's infringement verdict was based on PacBio's defective claims about these products, for which Oxford is entitled to judgment as a matter of law.

As I have already discussed, however, in fact, substantial evidence supports the jury's verdict on infringement of the '400, '323 and '056 patents.

Also, the cases cited by ONT as explained by PacBio simply reinforced that a court may reverse a general verdict where it is impossible to tell whether the jury rests its conclusion on a legally inadequate ground, but here it is not impossible to do so for reasons I have already explained. So this aspect of ONT's motion is denied.

Finally, at last, I come to the last basis for relief from ONT, seeking judgment as a matter of law that all asserted claims of the '056 patent are indefinite.

Specifically, ONT argues that the Court should find that claims 2 and 12 of the '056 patent are indefinite because indefiniteness is a question of law for the Court to decide, and the jury already found that claim 1 of the '056 patent[,] from which claims 2 and 12 depend[,] is indefinite.

First, ONT insists that the Supreme Court's decision in *Teva vs. Sandoz*[, 574 U.S. 318 (2015),] made indefiniteness an issue exclusively for the court to decide. I disagree. I continue to believe that I have discretion to put . . . indefiniteness before the jury where[,] as here, there are subsidiary fact disputes that inform the indefiniteness decision as a matter of law. ONT has cited no contrary Federal Circuit case.

In fact, instead, the Federal Circuit [has] made clear that indefiniteness is amenable to resolution by the jury where the issues are factual in nature.<sup>10</sup> So I think it was appropriate to put

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<sup>10</sup> See, e.g., *Bombardier Recreational Prods. Inc. v. Arctic Cat Inc.*, 785 Fed. App'x 858, 867 (Fed. Cir. 2019).

indefiniteness before the jury. The fact dispute [here] related to the kinetic step limitation.

The verdict form[,] which asks the jury to find whether each asserted claim of the '056 patent was invalid as indefinite[,] was a general verdict form. I would cite to [*Function Media LLC v. Google, Inc.*, 708 F.3d 1310, 1329-30 (Fed. Cir. 2013),] as further support that this is a general verdict form.

We did not bring the jury process into the open so that we could see what has been done. We did not do that through this verdict form, so it's a general verdict form.

While ONT insists that its motion is not based on any argument that the verdict is inconsistent, I disagree. The defendants' motion is premised on a purported inconsistency between the jury's finding of [indefiniteness<sup>11</sup>] of claim 1 and its finding of no [indefiniteness] on claim[s] 2 and 12.

Therefore, ONT, by failing to object to the inconsistent verdict or the purportedly inconsistent verdict[,] has waived that argument and waived that as a basis for relief.[<sup>12</sup>]

In any event, even if I treat this as a nonwaived motion for judgment as a matter of law, I still deny and will deny, do deny ONT's motion.

ONT is correct that with respect to claim 1 of the '056 patent, it is presumed that the jury found that a person of skill in the art would not be able to ascertain the balance of the "kinetics steps" limitation of claim 1, but even though that same fact dispute arose in connection with claims 2 and 12, the Court must presume that the jury did not make that same finding in connection with claim 2 and claim 12.

The Court must presume that the jury resolved the underlying factual issues in favor of the verdict winner, and unlike with respect to claim 1, with respect to claims 2 and 12, PacBio is the verdict winner on the [indefiniteness] issue.

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<sup>11</sup> As the parties understood (*see* D.I. 513 at 2), the Court mistakenly and repeatedly referenced "enablement" when it was plainly ruling on the portion of the motion relating to indefiniteness. The necessary corrections are noted here and through the remainder of this order with brackets.

<sup>12</sup> *See, e.g., Frank C. Pollara Grp., LLC v. Ocean View Inv. Holding, LLC*, 784 F.3d 177, 191 (3d Cir. 2015).

Thus, the pertinent question becomes is there substantial evidence to support the implied fact-finding on claims 2 and 12 that they are not invalid for lack of [indefiniteness]. And PacBio has shown that, yes, there is substantial evidence that, taken in a light most favorable to PacBio, could have been credited by a reasonable jury in support of finding no [indefiniteness;] for instance, Dr. Ha's testimony.

The point is that on the [indefiniteness] questions on the '056 patent, the jury could have sided with either party. It sided with ONT on claim 1 and sided with PacBio on claims 2 and 12. I have no basis here to not uphold all portions of that '056 verdict. I have no reason to conclude anything other than that the jury found reasonably that ONT met its burden of proof with respect to claim 1 and failed to meet its burden of proof with respect to claims 2 and 12. Therefore, I'm denying this aspect of the defendants' motion, just as I denied all of the other portions of both motions that were argued the other day.

August 13, 2020  
Wilmington, Delaware

  
HONORABLE LEONARD P. STARK  
UNITED STATES DISTRICT COURT